

Claims

Please amend the claims as follows:

1. (Currently Amended) A device comprising:

a network interface for coupling to a network; and

a processor used for encoding voice data into data packets and coupled with the network interface, wherein the processor is adapted to:

establish a connection through the network for exchanging the data packets that represent voice between the device and a corresponding device;

determine a round trip time for data packets being exchanged through the connection using the same processor that encodes the voice data;

determine at least one performance parameter from transmitting a plurality of data packets along the connection using the same processor that encodes the voice data; and

determine a quality of service of the connection from the round trip time and the performance parameter.

2. (Original) The device of claim 1, wherein

the performance parameter is determined from a voice sample delay at a the digital signal processing stage.

3. (Original) The device of claim 1, wherein

the performance parameter is determined from a voice sample loss at a the digital signal processing stage.

4. (Currently Amended) The device of claim 1, wherein the processor is further adapted to:

determine a network connection impairment factor from the round trip time; and

determine a performance impairment factor from by quantifying the performance parameter,

wherein the quality of service is determined from the network connection impairment factor and the performance impairment factor.

5. (Currently Amended) The device of claim 1, wherein

the performance impairment factor is determined according to silence, redundancy, interpolation and prediction characteristics of the data packets using the same processor that encodes the voice data,

the quality of service is determined by adding together the network connection impairment factor and the performance impairment factor.

6. (Original) The device of claim 1, wherein the processor is further adapted to:

determine an updated performance parameter from transmitting a plurality of additional data packets; and

determine an updated quality of service of the connection from the updated performance parameter.

7. (Currently Amended) An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by a first device, result in:

establishing a connection through a network for exchanging data packets that represent voice between the first device and a second device;

determining a round trip time for data packets being exchanged through the connection;

determining at least one performance parameter from transmitting a plurality of data packets along the connection, the performance parameter determined in a same digital signal processing stage used for compressing or decompressing voice signals into the data packets; and

determining a quality of service of the connection from the round trip time and the performance parameter.

8. (Currently Amended) The article of claim 7, wherein

the performance parameter is determined from a voice sample delay at a the digital signal processing stage.

9. (Currently Amended) The article of claim 7, wherein

the performance parameter is determined from a sample loss at a the digital signal processing stage.

10. (Currently Amended) The article of claim 7, wherein the instructions further result in:

determining a network connection impairment factor from the round trip time; and determining a performance impairment factor ~~from~~ by quantifying the performance parameter,

wherein the quality of service is determined from the network connection impairment factor and the performance impairment factor.

11. (Currently Amended) The article of claim 7 10, wherein

the performance impairment factor is determined according to silence, redundancy, interpolation and prediction characteristics of the data packets in the same digital signal processing stage used for compressing or decompressing voice signals into the data packets.

the quality of service is determined by adding together the network connection impairment factor and the performance impairment factor.

12. (Original) The article of claim 7, wherein the instructions further result in:

determining an updated performance parameter from transmitting a plurality of additional data packets; and

determining an updated quality of service of the connection from the updated performance parameter.

13. (Currently Amended) A device comprising:

means for coupling to a network;

means for establishing a connection through the network for exchanging data packets that represent voice between the device and a corresponding device;

means for determining a round trip time for data packets being exchanged through the connection;

means for determining at least one performance parameter from transmitting a plurality of data packets along the connection, the performance parameter using a same digital signal processing stage used for encoding voice signals into the data packets; and

means for determining a quality of service of the connection from the round trip time and the performance parameter.

14. (Currently Amended) The device of claim 13, wherein

the performance parameter is determined from a voice sample delay at a the digital signal processing stage.

15. (Currently Amended) The device of claim 13, wherein
the performance parameter is determined from a voice sample loss at a the digital
signal processing stage.

16. (Currently Amended) The device of claim 13, further comprising:
means for determining a network connection impairment factor from the round trip
time; and

means for determining a performance impairment factor ~~from by quantifying~~ the
performance parameter,

wherein the quality of service is determined from the network connection impairment
factor and the performance impairment factor.

17. (Currently Amended) The device of claim 13 16, wherein
the performance impairment factor is determined according to silence, redundancy,
interpolation and prediction characteristics of the data packets in the same digital signal
processing stage used for encoding voice signals into the data packets,

the quality of service is determined by adding together the network connection
impairment factor and the performance impairment factor.

18. (Original) The device of claim 13, further comprising:

means for determining an updated performance parameter from transmitting a
plurality of additional data packets; and

means for determining an updated quality of service of the connection from the
updated performance parameter.

19. (Currently Amended) A method comprising:

establishing a connection through a network for exchanging data packets that
represent voice between a first device and a second device;

determining a round trip time for data packets being exchanged through the
connection;

transmitting a plurality of the data packets along the connection;

determining at least one performance parameter from transmitting the data packets, the performance parameter determined in a same digital signal processing stage used for compressing and decompressing voice signals into the data packets; and

determining a quality of service of the connection from the round trip time and the performance parameter.

20. (Original) The method of claim 19, wherein:

the performance parameter is determined from a voice sample delay at a digital signal processing stage.

21. (Original) The method of claim 19, wherein:

the performance parameter is determined from a voice sample loss at a digital signal processing stage.

22. (Currently Amended) The method of claim 19, further comprising:

determining a network connection impairment factor from the round trip time; and
determining a performance impairment factor ~~from~~ by quantifying the performance parameter,

wherein the quality of service is determined from the network connection impairment factor and the performance impairment factor.

23. (Currently Amended) The method of claim ~~19~~ 22, wherein:

the performance impairment factor is determined according to silence, redundancy, interpolation and prediction characteristics of the data packets in the same digital signal processing stage used for compressing and decompressing voice signals into the data packets,

the quality of service is determined by adding together the network connection impairment factor and the performance impairment factor.

24. (Original) The method of claim 19, further comprising:

transmitting additional data packets;
determining an updated performance parameter from transmitting the additional data packets; and

determining an updated quality of service of the connection from the updated performance parameter.